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APPRENTICESHIP TRAINING

CEMENT FINISHER Program

Alberta

MANPOWER
Apprenticeship and
Trade Certification Division

DDN 5595 121

TABLE OF CONTENTS

The Goal of Apprenticeship Training	1
Basic Requirements	2
Credits	2
Benefits	2
Directions for Prospective Apprentices	3
Apprenticeship Route Toward Certification	4
Apprenticeship Committee Structure	5
Apprenticeship Committee Members	5
Procedures for Recommending Revision(s) to the Course Outline	6
Preface Optional	6
Safety Education	7
Subjects and Time Distribution	9

COURSE OUTLINE

First Period Subjects	10
Second Period Subjects	13
Suggested Reference Materials	15
Technical Training Schools	15
Location of Apprenticeship and Trade Certification Division Regional Offices	15
Trade Regulations	16

CEMENT FINISHER TRADE

THE GOAL OF APPRENTICESHIP TRAINING

To develop a competent tradesman who, through skill and knowledge, is capable of mixing, placing and finishing concrete and related materials.

THE PRODUCT OF APPRENTICESHIP — a graduate who will:

- ★ know the C.S.A. and other standards that apply to cement and concrete.
- ★ be able to perform tests to confirm concrete quality.
- ★ be able to interpret building codes, plans and specifications as they apply to the trade.
- ★ be able to finish concrete in a workman-like manner.
- ★ be able to cut, patch, maintain and repair concrete structures.

CEMENT FINISHER APPRENTICESHIP INFORMATION

Basic Requirements:

- ★ Indenture for 3 periods of Trade experience.
- ★ Attend an 8 week technical training course in the first and second periods.
- ★ Fulfill the requirements for each period including 1200 hours of work experience exclusive of time spent at the training course; successfully complete the technical training course and obtain a satisfactory employer's report.
- ★ Education — a minimum requirement is the completion of grade 9 or a pass on an equivalent entrance examination as prescribed by the Trade regulation.
- ★ Age — the minimum age for apprentices is 16 years. There is no upper age limit.

Credits:

- ★ Accelerated patterns of apprenticeship may be granted for related technical training and/or experience.

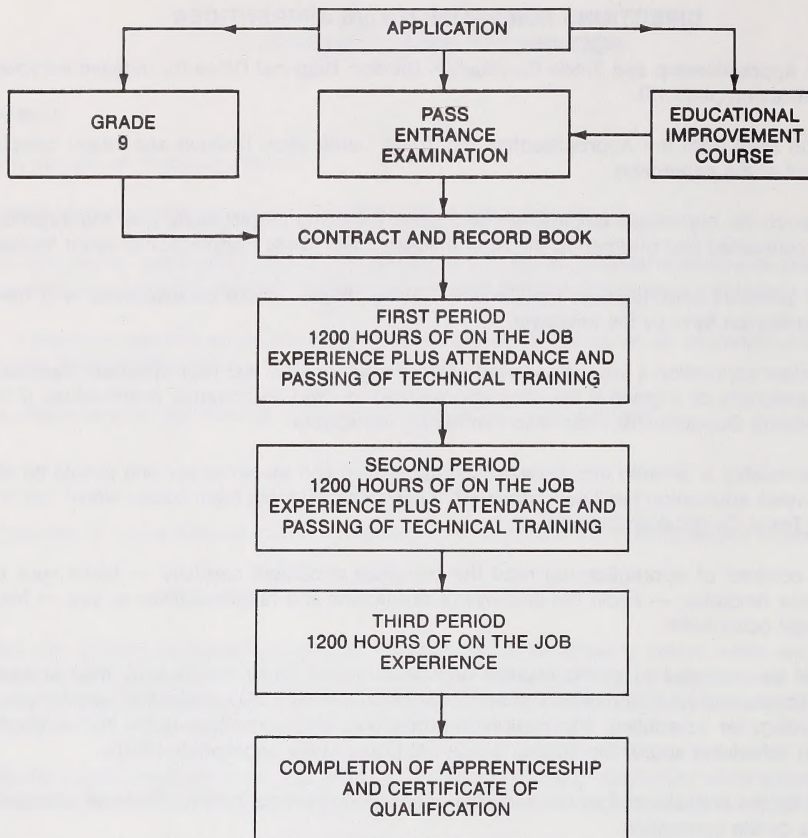
Benefits:

- ★ Apprenticeship is a learning-while-earning program. During the apprenticeship period, while working at the trade, apprentices are assured by regulation of a minimum percentage of the prevailing journeyman rate: Progress from one rate to the next takes place only after successful completion of all the requirements for each period. (Details are outlined in the Record Book.)
- ★ All apprentices 16 years of age and older are normally eligible for training allowances while attending technical training courses. These allowances are funded by the Canada Employment and Immigration Commission.
- ★ Administrative procedures establishing the amount of training allowance is complex and can vary with an individual's circumstances. Contact a local Canada Employment Centre for details.
- ★ An apprentice who successfully completes the program will graduate with an Alberta Completion of Apprenticeship Certificate and a Certificate of Qualification.
- ★ The most significant benefit to the graduate apprentice is that he is well trained in technical and practical aspects of the trade and is able to make a worthwhile and productive contribution to society. Society in return, will provide an opportunity for livelihood.

DIRECTIONS FOR PROSPECTIVE APPRENTICES

- ★ Contact the nearest Apprenticeship and Trade Certification Division Regional Office for detailed information and counselling (see list of offices on page 15).
- ★ Obtain an application form from the Apprenticeship and Trade Certification Division and neatly complete, in full, the information requested of the apprentice.
- ★ Persevere in the search for apprentice employment and upon obtaining employment, give the application to the employer. It should be completed and returned to the Apprenticeship and Trade Certification Division forthwith.
- ★ Any time credit, for previous experience in the Cement Finisher trade, should be discussed with the employer and requested on the application form by the employer.
- ★ Attach to the apprentice application a copy (transcript) of the marks for your last year of school. Applicants who do not have their school transcripts or a grade 9 standing are required to write an entrance examination. If transcripts have been lost, contact Alberta Education for information on school transcripts.
- ★ A contract of apprenticeship is entered into between the apprentice and the employer and should be signed within 90 days after the apprentice application has been approved. If contracts have not been issued within this time, contact the Apprenticeship and Trade Certification Division.
- ★ Before signing the contract of apprenticeship read the complete document carefully — know your obligations and responsibilities to your employer — know the employer's obligations and responsibilities to you — feel confident you have selected the right occupation.
- ★ Know when you will be expected to attend classes and be prepared to attend. In early May of each year, School Schedules are sent to you and your employer. The employer also receives a class selection card for you, which is to be completed and submitted for scheduling. Information on procedures also accompanies the above. Confirmation on the date you actually get scheduled and/or the Official Notice will follow at the appropriate time(s).
- ★ Prepare in advance for the financial obligations required of you during school training. Reference materials and school supplies are paid for by the apprentice.
- ★ While an apprentice, it will be your responsibility to respond promptly to mailed directions and requests from the Apprenticeship and Trade Certification Division.

APPRENTICESHIP ROUTE TOWARD CERTIFICATION



APPRENTICESHIP COMMITTEE STRUCTURE

Cement Finisher Provincial Apprenticeship Committee

The Provincial Apprenticeship Committee for the Cement Finisher Trade is comprised of members from Local Apprenticeship Committees from the cities of Edmonton and Calgary.

This Committee is concerned with the policies that guide the program and make recommendations to the Apprenticeship and Trade Certification Board and the Director of Apprenticeship and Trade Certification Division in the following areas:

- ★ Contribute current information relative to changes in the trade and requirements of industry.
- ★ Make recommendations for changes to existing trade regulations.
- ★ Assist in updating of the training program through recommendations for revisions to the course outline and attendant examinations.

Local Apprenticeship Committee

Local Apprenticeship Committees are concerned with individuals and trade situations within a local region. Meetings are held throughout the year to make recommendations and to discuss problems relating to the apprenticeship program. Members who serve on committees are nominated by employer and labour organizations, and membership is equally divided into employer and employee representation in accordance with The Manpower Development Act.

Apprenticeship Committee Members:

Mr. R. Walters — Edmonton — Employer
Mr. A. Pohl — Edmonton — Employer
Mr. M. Gomes — Edmonton — Employee
Mr. H. Rohheuser — Edmonton — Employee
Mr. M. Gannon — Edmonton — Employee (Alternate)
Mr. F. Dyck — Calgary — Employer
Mr. G. Binder — Calgary — Employer
Mr. C. Pynenberg — Calgary — Employee
Mr. R. Harless — Calgary — Employee
Mr. H. Herfort — Calgary — Employer (Alternate)

CEMENT FINISHER PROGRAM COURSE OUTLINE

This outline has been prepared in accordance with recommendations from the Provincial Apprenticeship Committee for the Cement Finisher Trade in the Province of Alberta.

The outline was updated following consideration given to recommendations and suggestions from:

- Local Apprenticeship Committees
- Representatives from training institutes
- Curriculum Sub-Committee from the Provincial Apprenticeship Committee

PROCEDURES FOR RECOMMENDING REVISION(S) TO THE COURSE OUTLINE

Any concerned citizen or group in the Province of Alberta may make recommendations for change by writing to the Apprenticeship and Trade Certification Division, Edmonton.

It is requested that recommendations for change refer to specific areas and state references used. Recommendations received will be placed before regular meetings of the Provincial Apprenticeship Committee.

PREFACE

The lectures, demonstrations and assignments listed in this course outline are intended to familiarize the apprentice with the scope of the trade and provide the necessary knowledge and skills required to place, finish, cut and patch concrete and related materials and are minimal requirements.

The subjects of mathematics and technical information have been determined to be necessary components of technical training when applied in terms of trade knowledge.

The hours allotted for various subjects are intended as guides. Some flexibility in accommodating special circumstances such as statutory holidays is anticipated.

Metric statement and occupational health shall be included.

SAFETY EDUCATION

Safe working procedures and conditions, accident prevention and the preservation of health is of primary importance in the Apprenticeship programs in Alberta. These responsibilities are shared and require the joint efforts of the government, employers, employees and the general public. Therefore, it is imperative that all parties become aware of circumstances that may lead to injury or harm and that safe learning experiences and environment can be created by controlling the variables and behaviors that may contribute to or cause an accident and/or an injury.

It is generally recognized that a safe attitude contributes to an accident free environment. As a result a healthy safe attitude towards accident prevention will benefit an employee by helping to avoid injury, loss of time and loss of pay.

A tradesman is possibly exposed to more hazards than any other person in the work force and therefore, should be familiar with the Occupational Health and Safety Act and Regulations dealing with his own personal safety and the special safety rules applying to each job.

LEGAL AND ADMINISTRATIVE ASPECTS

Employer's Responsibilities:

Accident prevention and the provisions of safe working conditions are the responsibilities of an employer. The company is responsible for:

1. The provision and maintenance of safety equipment
2. The provision of protective devices and clothing (as required by the Occupational Health & Safety Act, General Safety Regulations)
3. The enforcement of safe working procedures
4. Adequate safeguards for machinery, equipment and tools
5. Observance of all accident prevention regulations
6. Adequate training to allow a worker to use or operate equipment in an effective and safe manner.

Government's Responsibilities:

The Apprenticeship and Trade Certification Division in conjunction with the respective Provincial Apprenticeship Committee assumes the responsibility to assure that adequate safety is reflected in the curriculum and that adequate safety instruction is presented at the training establishments.

The Occupational Health and Safety Inspection Branch assumes the responsibility for periodic inspection of the operation to ensure that regulations for industry are being correctly observed.

Individual's Responsibilities:

The employee is responsible for:

1. Knowing and working in accordance with the safety regulations pertaining to job environment and
2. Working in such a way as not to endanger himself or his fellow employees

The major factor in safety is the individual employee, his personal attitude toward safety and having an awareness of the respective safety regulation.

CEMENT FINISHER PROGRAM

SUBJECT	TIME DISTRIBUTION HOURS	
	1st PERIOD TIME	2nd PERIOD TIME
Introduction	6	
Safety	15	12
Concrete		
Portland Cement	9	6
Material and Testing	21	15
Grout	12	21
Patching	12	30
Toppings		6
Pre Cast	6	
Concrete Placement		
Preparation	12	6
Placing	24	12
Forms	12	12
Blueprint Reading	24	12
Math	15	
Reinforcement		6
Finishing		
Trowel	27	21
Architectural	12	12
Special		12
Joints	3	
Curing		
Methods	9	12
Weather Requirements	6	
Tools and Equipment		
Cutting and Coring	9	24
Maintenance	18	21

CEMENT FINISHER PROGRAM

Subjects and Time Distribution

First Period:	8 Weeks	30 Hours Per Week	240 Hours
	Safety and Introduction		21
	Concrete		60
	Concrete Placement		87
	Finishing		27
	Curing		18
	Tools and Equipment		27
Second Period:	8 Weeks	30 Hours Per Week	240 Hours
	Safety		12
	Concrete		81
	Concrete Placement		48
	Finishing		45
	Curing		9
	Tools and Equipment		45

FIRST PERIOD

TOPIC

COURSE OBJECTIVES

A. INTRODUCTION TO THE TRADE

1. Describe the duty and responsibilities of an apprentice.
2. Describe the relationship with other trades.
3. Use the correct terminology for the trade.

B. SAFETY

1. Occupational Health and Safety Act Regulations
 1. Describe the function and purpose of the O.H.S. Act.
 2. Describe the function and purpose of the General Accident Prevention Regulations.
2. Explosive Actuated Tools
 1. Demonstrate the safe and correct use of explosive activated tools.
3. Housekeeping
 1. Demonstrate an ability to keep the work areas safe and tidy.
4. Personal Safety
 1. Demonstrate an ability to protect himself and others from dust, silica, fumes, gases and other respiratory and skin irritants common to his trade.

C. CONCRETE

1. Portland Cement
 1. Describe the history of cement and list the ingredients basic to its make up.
 2. Describe the manufacturing process of cement.
 3. Describe the make up and use of cements such as:
 - (a) normal portland cement
 - (b) high early cement
 - (c) sulfate resistant cement
 - (d) white cement
 - (e) masonry cement
2. Material and Testing
 - (a) water
 1. Describe the quality of water required for concrete.
 2. Describe hydration.
 3. Describe water cement ratio.
 - (b) aggregate
 1. List the make-up of fine and coarse aggregate.
 2. Perform finest modulus tests.
 3. Perform silt tests.
 4. List the advantages of and problems with light and semi-light weight aggregates.
 - (c) admixtures
 1. Explain why calcium chloride is used, how much may be used and when and why it may not be used.
 2. Describe why and when other accelerators are added to concrete.
 3. Describe when and why retarders are added.
 4. Describe the use of super plasticizers.
 5. Describe the use of air entraining agents.
 6. List colouring agents.
 - (d) design and test
 1. Demonstrate an ability to design concrete mix by mass and/or volume using tables and trial mixes.
 2. Perform slump tests.
 3. Perform air treatment tests.
 4. Prepare compressive test cylinders.
 5. Prepare tensile test samples.
 6. Perform compression and tensile tests and calculate the results.

TOPIC

COURSE OBJECTIVES

3. Grout

1. Demonstrate an ability to:
 - (a) mix and apply dry pack grout.
 - (b) list the make-up and use of special grouts.
 - (c) mix special grouts.
 - (d) use bonding agents.

4. Patching

1. Demonstrate an ability to:
 - (a) mix patching material to match colour and strength.
 - (b) describe methods of preparation of the surfaces.
 - (c) describe the use of bonding materials.

5. Precast Concrete and Tilt-up Concrete Panels

1. Demonstrate an ability to:
 - (a) place concrete and finish on site precast stairs, tilt-up panels and other concrete members.
 - (b) align reinforcement and place lift anchor.
 - (c) describe the basic theory of prestress and post-tension concrete.
 - (d) use releasing agents.
 - (e) erect precast and tilt-up concrete.

D. CONCRETE PLACEMENT

1. Preparation

- (a) slab on grade

1. Demonstrate an ability to:
 - (a) identify and remove organic material.
 - (b) choose, place and compact fill material to provide drainage and grade.
 - (c) layout and install edge forms and screeds.
 - (d) install and or check reinforcements.
 - (e) install vapour barrier.
 - (f) layout joints.
 - (g) layout embedded items, i.e. anchor bolts
 - (h) prepare tools and equipment.
 - (i) calculate and order concrete.

- (b) slabs, beams, columns and walls

1. Demonstrate an ability to:
 - (a) inspect forms for safety.
 - (b) prepare chutes, runways, hoisting equipment and tools.
 - (c) layout joints.
 - (d) layout embedded items.
 - (e) consult with other trades.

2. Placing

- (a) slab

1. Demonstrate an ability to:
 - (a) build and work from wet screeds.
 - (b) screed and hand float to grade.
 - (c) use a bullfloat.
 - (d) used edge treatment tools.
 - (e) list considerations that must be shown to other trades.
 - (f) adjust reinforcements during pour.
 - (g) consolidate concrete.
 - (h) install water stop.

- (b) walls, beams and columns

1. Demonstrate an ability to:
 - (a) describe the sequence and rate of pour.
 - (b) use consolidation equipment.
 - (c) list considerations that must be shown to other trades.
 - (d) use chutes and trunks.
 - (e) install water stop.

3. Forms

1. Demonstrate an ability to:
 - (a) recognize safe forming.
 - (b) construct edge forms.
 - (c) construct simple stair forms for finishing.
 - (d) strip and reshore beams and slabs.
 - (e) install curb and gutter forms.

4. Layout and Blueprint Reading

1. Demonstrate an ability to:
 - (a) layout slabs, curbs, sidewalks, simple stairs and footings using plan views, elevation and cross sections.
 - (b) turn angles, shoot lines, shoot levels and plumb using a transit.
 - (c) shoot levels and grades with a builder's level.

TOPIC

COURSE OBJECTIVES

- (d) set levels with laser equipment.
- (e) layout site work using chalkline and tape.
- (f) confirm material quality and job responsibilities from specifications.

5. Mathematics

- 1. Demonstrate an ability to:
 - (a) add, subtract, multiply and divide fractions, decimal fractions and whole numbers.
 - (b) find areas and volumes of regular and irregular shapes.
 - (c) calculate percentages.
 - (d) describe the properties of a basic right angle triangle.
 - (e) material take off from drawings and job site.
 - (f) function in the metric system.
 - (g) function in the imperial system.

E. FINISHING

1. Trowel Finish

- 1. Demonstrate an ability to:
 - (a) judge when concrete is ready to finish.
 - (b) use floats, hand trowels and power equipment.
 - (c) use edge tools.

2. Joints

- 1. Demonstrate an ability to:
 - (a) list common joints and their purpose.
 - (b) caulk and seal joints.
 - (c) describe methods of forming these joints.

F. CURING

1. Methods

- 1. Demonstrate an ability to:
 - (a) describe the purpose of curing.
 - (b) choose the correct curing method for the job, considering specifications, colour, humidity and temperature.
 - (c) apply curing methods.

2. Weather Requirements

- 1. Demonstrate an ability to:
 - (a) describe when cold weather protection is required.
 - (b) describe and apply methods of cold weather protection.
 - (c) describe when and why hot weather protection is required.
 - (d) describe flash set.
 - (e) describe the effect of freezing and thawing on concrete and subsoil.
 - (f) describe the effect of rain on freshly poured concrete.
 - (g) salvage and/or repair washed out slabs.

G. TOOLS AND EQUIPMENT

1. Cutting and Coring

- 1. Demonstrate an ability to:
 - (a) describe wet and dry cutting equipment.
 - (b) layout holes and joints.
 - (c) considering reinforcements i.e. post-tension cables or bars.
 - (d) use impact drilling equipment.
 - (e) describe green cutting.
 - (f) describe cured cutting.
 - (g) use of power grinders.

2. Maintenance of Tools and Equipment

- 1. Demonstrate an ability to:
 - (a) perform preventive maintenance, trouble shoot and tune-up of 2 and 4 cycle small engines, i.e. gas and diesel.
 - (b) perform preventive maintenance and repair power trowels.
 - (c) perform preventive maintenance on cutting and coring equipment.
 - (d) maintenance of hand tools.
 - (e) maintenance of electrical tools and power cords.

SECOND PERIOD

TOPIC

COURSE OBJECTIVES

A. SAFETY

1. Demonstrate an ability to:
 - (a) give hand signals for hoisting.
 - (b) tie knots and hitches used in the trade.
 - (c) calculate mass by volume for hoisting materials.
 - (d) describe and use hooks, slings, and shackles.
 - (e) interpret tables and regulations that apply to hoisting.
 - (f) describe and use safety equipment i.e. shoes, glasses, hats, clothing, respirators, dust masks, fire extinguishers, etc.

B. CONCRETE

1. Portland Cement
2. Material and Testing
 - (a) batching

1. Describe the number system used in the industry to identify cement.
1. Describe C.S.A. and other specifications for cement.

- (b) admixtures

1. Demonstrate expertise in batching of concrete for:
 - (a) water cement ratio
 - (b) cold weather
 - (c) hot weather
 - (d) water proof concrete
 - (e) radiation shields
 - (f) topping and overlays
 - (g) special concretes

3. Grout

1. Demonstrate expertise on the use of:
 - (a) super plasticizers
 - (b) air entrainment agents
 - (c) other admixtures
 - (d) fibre reinforcements
 - (e) fly ash, silica fumes and natural pozzuolanas

4. Patching

1. Demonstrate expertise in:
 - (a) mixing and installing non-shrink grout.
 - (b) mixing and applying epoxy grout.
 - (c) finishing of grout.
2. Describe the make-up and purpose for other special grouts.
1. Demonstrate expertise in:
 - (a) choosing and mixing patch material.
 - (b) applying structural water proof patches to foundations.
 - (c) slabjacking and gunnite applications.
 - (d) applying pressure grout.
 - (e) the repair and patching of structural members.
 - (f) patching precast concrete.
 - (g) the use of bonding materials preparing surfaces for patching.

5. Topping

1. Demonstrate an ability to:
 - (a) mix, place and finish concrete topping.
 - (b) mix, place and finish self leveling topping.
 - (c) describe and apply bonding materials.

- (a) special coatings

1. Demonstrate an ability to:
 - (a) mix and apply special coatings such as epoxy, hardeners and sealers.

C. CONCRETE PLACEMENT

1. Preparation to Place
2. Concrete Placement

1. Demonstrate expertise in organizing crews tools and placing equipment.
2. Demonstrate expertise in calculating and ordering.
1. Demonstrate expertise in:
 - (a) consolidating concrete
 - (b) roller compacted concrete
 - (c) superflat floor construction
 - (d) other operations learned in first period
 - (e) applying dry shakes and hardeners.

TOPIC**COURSE OBJECTIVES****3. Forms**

1. Demonstrate expertise in the:
 - (a) forming of simple stairs
 - (b) stripping of stair forms.
 - (c) stripping, cleaning, treating and reusing forms.
 - (d) lay out and construction of curb, gutter and sidewalk forms.
 - (e) stripping and reshoring.
 - (f) constructing concrete drainage systems. i.e. catch basins, man holes and laying concrete pipe.

4. Layout and Blueprint Reading

1. Demonstrate expertise in interpreting drawings and specifications as they apply to the trade.
2. Demonstrate expertise in the use of transits builder level, laser levels, chalk lines, tapes, carpenters level and framing square, as they apply to the trade.

5. Reinforcement

1. Demonstrate an ability to:
 - (a) protect post tension systems during concrete placement.
 - (b) align reinforcement as concrete is poured.
 - (c) list hazards of prestressed reinforcing during pour operations and consolidation.
 - (d) place reinforcing mesh.
2. List the basic principles of:
 - (a) compression
 - (b) tension
 - (c) lateral pressures
 - (d) torque
 - (e) racking and shearing
 - (f) deflection as reinforcing steel is used to counteract these forces.

D. FINISHING**1. Trowel Finish**

1. Demonstrate expertise in use of hand trowels, floats, edge tool and power equipment.
2. Demonstrate an ability to:
 - (a) finish super flat floors — finish special concrete
 - (b) apply and finish hardeners.

2. Architectural Finish

1. Demonstrate an ability to:
 - (a) describe special problems that must be considered when placing architectural concrete, i.e. form leaks, deflection and consolidation.
 - (b) use form liners.
 - (c) expose aggregate.
 - (d) apply textures and parging.
 - (e) clean and protect forms.
 - (f) apply sealers.

3. Special Finishing Slab

1. Demonstrate an ability to:
 - (a) expose aggregate
 - (b) finish coloured slabs
 - (c) use moulds and templates to decorate floors, driveways and sidewalks.
 - (d) finish special concrete.
 - (e) apply and finish hardeners.

E. CURING**1. Methods**

1. Demonstrate expertise in the use of:
 - (a) curing compounds
 - (b) water to cure
 - (c) steam to cure
 - (d) coverings
 - (e) temperature controlling equipment

F. TOOLS AND EQUIPMENT

- | | |
|------------------------------|---|
| 1. Cutting and Coring | 1. Demonstrate expertise in:
(a) the use of diamond coring equipment.
(b) rotary and impact drilling tools.
(c) layout of cuts and holes.
(d) avoiding loss of structural strength.
(e) the use of wall sawing, floor sawing, grooving and grinding equipment. |
| 2. Maintenance and Equipment | 1. Demonstrate an ability to:
(a) maintain and repair power screeding equipment, power consolidating equipment.
(b) maintain and keep clean concrete handling equipment. |

SUGGESTED REFERENCE MATERIALS

Canadian Portland Cement Association — Publications

Canadian Standards Association: Can 3 - A23 - M77
 Can 3 - A23-2 - M77

TECHNICAL TRAINING SCHOOLS

The Cement Finisher apprenticeship training program is offered by the Alberta Manpower, Apprenticeship and Trade Certification Division. Staff and facilities for teaching the program are supplied by:

1. Red Deer College

**LOCATION OF APPRENTICESHIP AND TRADE
 CERTIFICATION DIVISION REGIONAL OFFICES**

BONNYVILLE

CALGARY

EDMONTON

FORT McMURRAY

GRANDE PRAIRIE

HINTON

LETHBRIDGE

MEDICINE HAT

PEACE RIVER

RED DEER

VERMILION

GOVERNMENT OF THE PROVINCE OF ALBERTA

ALBERTA REGULATION 39/85

(Filed on February 20, 1985)

MANPOWER DEVELOPMENT ACT

MINISTERIAL ORDER

I, Ernie Isley, Minister of Manpower, pursuant to sections 30(2) and 37(2) of the Manpower Development Act, hereby make the Regulation in the attached Appendix being the Cement Finisher Trade Regulation.

DATED at Edmonton, Alberta, this 18th day of February, 1985.

ERNIE ISLEY
Minister of Manpower

A P P E N D I X

MANPOWER DEVELOPMENT ACT

Cement Finisher Trade Regulation

1(1) In this regulation,

(a) "cement finisher" means a person who is engaged in finishing, restoring, repairing and applying curing or surface treatments to concrete, whether manually or by mechanical means;

(b) "General Regulations" means the General Regulations (Alta. Reg. 43/77) under the *Manpower Development Act*;

(c) "trade" means the trade of cement finisher.

(2) The definitions in the General Regulations apply in this regulation.

PART 1

APPRENTICESHIP AND TRADE TRAINING

2 A person is eligible to be an apprentice in the trade if he satisfies the requirements of section 5 of the General Regulations and

(a) produces evidence of at least a grade 9 education or the equivalent, or

(b) passes the entrance examination prescribed by the Board.

3(1) Subject to subsections (2), (3) and (4), an employer who is a journeyman, or employs a journeyman, may employ 1 apprentice and 1 additional apprentice for each additional journeyman he employs.

(2) If the supply of journeymen in a location where an employer is carrying on business is insufficient to permit the employer to carry out his work commitments, the Director may authorize the employer to employ apprentices in addition to those permitted under subsection (1).

(3) The Director may authorize an employer to employ an apprentice, in addition to those permitted under subsections (1) and (2), on a temporary basis to train him in a branch of the trade not engaged in by the employer to whom he is apprenticed.

(4) For the purpose of subsections (1) and (2), an apprentice employed temporarily under subsection (3) shall not be considered to be apprenticed to his temporary employer.

4(1) The term of apprenticeship shall consist of 3 periods of 12 months each.

(2) Each period referred to in subsection (1) shall consist of not less than 1200 hours of employment, excluding the time spent attending technical courses prescribed by the Board.

5 When a contract of apprenticeship is registered with the Director, he shall issue to the apprentice the official record book referred to in section 14 of the General Regulations.

6(1) An apprentice shall not advance to the next period until the Director has authorized him to do so by making an entry in the apprentice's official record book in accordance with subsection (2).

(2) The Director shall make an entry in the apprentice's official record book authorizing advancement to the next period, when the apprentice

- (a) has completed the previous period of apprenticeship,
- (b) has received, in the opinion of the Director, a satisfactory report from
 - (i) his employer, and
 - (ii) the school at which he attended technical training courses prescribed by the Board,
- (c) has completed the tests and examinations prescribed by the Board, and
- (d) has attained pass marks prescribed by the Board in the tests and examinations referred to in clause (c).

7 The official record book of an apprentice shall be kept in the possession of his employer, and on termination of the employment of the apprentice, the employer shall present the completed book to him.

8(1) An employer shall pay wages to an apprentice that are not less than the following percentages of the prevailing wages paid to a journeyman:

- (a) 65% in the first period;
- (b) 75% in the 2nd period;
- (c) 85% in the 3rd period.

(2) Notwithstanding subsection (1), the wages paid to an apprentice shall not be less than the minimum wage fixed pursuant to the *Employment Standards Act*.

(3) An employer is not required to pay wages to an apprentice during the time the apprentice spends attending technical training courses prescribed by the Board.

9 The hours of work and working conditions of an apprentice shall be the same as those of a journeyman.

PART 2

CERTIFICATION

10 In accordance with section 31(b) of the General Regulations, the Director may issue the following class of certificates in the trade:

- (a) Certificate of Qualification.

11 In accordance with section 32(d) of the General Regulations, the Director may issue a Certificate of Qualification for the trade, without examination to a person who holds

- (a) a Certificate of Completion of Apprenticeship in the trade issued by another province within Canada, or
- (b) a Certificate of Qualification or a Certificate of Proficiency in the trade issued by another province within Canada, bearing an Interprovincial Standards Red Seal.

12(1) In accordance with section 32(b) of the General Regulations, the Director may issue a Certificate of Qualification to a person who successfully completes an examination referred to in this section.

(2) An application to take an examination for a Certificate of Qualification shall be made to the Director.

(3) Documentary evidence acceptable to the Director shall be presented by an applicant for an examination showing that the applicant

(a) holds a certificate equivalent to an Alberta Certificate of Qualification issued by a provincial authority outside Alberta, or

(b) has at least 4 years acceptable work experience in the trade.

(3) The applicant shall provide translations into the English language acceptable to the Director, of credentials other than in English, submitted pursuant to subsection (2).

13 A Certificate of Qualification issued under this regulation is effective unless cancelled or suspended by the Director in accordance with section 42 or 43 of the General Regulations.

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